

Welcome to STN International! Enter x:x

LOGINID:sssptaul21zxn

PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

* * * * * Welcome to STN International * * * * *

NEWS	1		Web Page URLs for STN Seminar Schedule - N. America
NEWS	2	Apr 08	"Ask CAS" for self-help around the clock
NEWS	3	Apr 09	BEILSTEIN: Reload and Implementation of a New Subject Area
NEWS	4	Apr 09	ZDB will be removed from STN
NEWS	5	Apr 19	US Patent Applications available in IFICDB, IFIPAT, and IFIUIDB
NEWS	6	Apr 22	Records from IP.com available in CAPLUS, HCAPLUS, and ZCAPLUS
NEWS	7	Apr 22	BIOSIS Gene Names now available in TOXCENTER
NEWS	8	Apr 22	Federal Research in Progress (FEDRIP) now available
NEWS	9	Jun 03	New e-mail delivery for search results now available
NEWS	10	Jun 10	MEDLINE Reload
NEWS	11	Jun 10	PCTFULL has been reloaded
NEWS	12	Jul 02	FOREGE no longer contains STANDARDS file segment
NEWS	13	Jul 22	USAN to be reloaded July 28, 2002; saved answer sets no longer valid
NEWS	14	Jul 29	Enhanced polymer searching in REGISTRY
NEWS	15	Jul 30	NETFIRST to be removed from STN
NEWS	16	Aug 08	CANCERLIT reload
NEWS	17	Aug 08	PHARMAMarketLetter(PHARMAML) - new on STN
NEWS	18	Aug 08	NTIS has been reloaded and enhanced
NEWS	19	Aug 19	Aquatic Toxicity Information Retrieval (AQUIRE) now available on STN
NEWS	20	Aug 19	IFIPAT, IFICDB, and IFIUIDB have been reloaded
NEWS	21	Aug 19	The MEDLINE file segment of TOXCENTER has been reloaded
NEWS	22	Aug 26	Sequence searching in REGISTRY enhanced
NEWS	23	Sep 03	JAPIO has been reloaded and enhanced
NEWS	24	Sep 16	Experimental properties added to the REGISTRY file
NEWS	25	Sep 16	CA Section Thesaurus available in CAPLUS and CA
NEWS	26	Oct 01	CASREACT Enriched with Reactions from 1907 to 1985
NEWS	27	Oct 21	EVENTLINE has been reloaded
NEWS	28	Oct 24	BEILSTEIN adds new search fields
NEWS	29	Oct 24	Nutraceuticals International (NUTRACEUT) now available on STN
NEWS	30	Oct 25	MEDLINE SDI run of October 8, 2002
NEWS	31	Nov 18	DKILIT has been renamed APOLLIT
NEWS	32	Nov 25	More calculated properties added to REGISTRY
NEWS	33	Dec 02	TIBKAT will be removed from STN
NEWS	34	Dec 04	CSA files on STN
NEWS	35	Dec 17	PCTFULL now covers WP/PCT Applications from 1978 to date
NEWS	36	Dec 17	TOXCENTER enhanced with additional content
NEWS	37	Dec 17	Adis Clinical Trials Insight now available on STN
NEWS	38	Dec 30	ISMEC no longer available
NEWS	39	Jan 13	Indexing added to some pre-1967 records in CA/CAPLUS
NEWS	40	Jan 21	NUTRACEUT offering one free connect hour in February 2003
NEWS	41	Jan 21	PHARMAML offering one free connect hour in February 2003
NEWS	42	Jan 29	Simultaneous left and right truncation added to COMPENDEX, ENERGY, INSPEC
NEWS	43	Feb 13	CANCERLIT is no longer being updated
NEWS	44	Feb 24	METADEX enhancements

10/048,157

NEWS 45 Feb 24 PCTGEN now available on STN
NEWS 46 Feb 24 TEMA now available on STN
NEWS 47 Feb 26 NTIS now allows simultaneous left and right truncation
NEWS 48 Feb 26 PCTFULL now contains images
NEWS 49 Mar 04 SDI PACKAGE for monthly delivery of multifile SDI results

NEWS EXPRESS January 6 CURRENT WINDOWS VERSION IS V6.01a,
CURRENT MACINTOSH VERSION IS V6.0b(ENG) AND V6.0Jb(JP),
AND CURRENT DISCOVER FILE IS DATED 01 OCTOBER 2002
NEWS HOURS STN Operating Hours Plus Help Desk Availability
NEWS INTER General Internet Information
NEWS LOGIN Welcome Banner and News Items
NEWS PHONE Direct Dial and Telecommunication Network Access to STN
NEWS WWW CAS World Wide Web Site (general information)

Enter NEWS followed by the item number or name to see news on that specific topic.

All use of STN is subject to the provisions of the STN Customer agreement. Please note that this agreement limits use to scientific research. Use for software development or design or implementation of commercial gateways or other similar uses is prohibited and may result in loss of user privileges and other penalties.

* * * * * STN Columbus * * * * *

FILE 'HOME' ENTERED AT 13:41:25 ON 19 MAR 2003

=> file casreact
COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
0.21	0.21

FULL ESTIMATED COST

FILE 'CASREACT' ENTERED AT 13:41:38 ON 19 MAR 2003
USE IS SUBJECT TO THE TERMS OF YOUR CUSTOMER AGREEMENT
COPYRIGHT (C) 2003 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications.

FILE CONTENT:1907 - 16 Mar 2003 VOL 138 ISS 11

Some records from 1974 to 1991 are derived from the ZIC/VINITI data file and provided by InfoChem and some records are produced using some INPI data from the period prior to 1986.

This file contains CAS Registry Numbers for easy and accurate substance identification.

Crossover limits have been increased. See HELP RNCROSSOVER for details.

Structure search limits have been raised. See HELP SLIMIT for the new, higher limits.

=> s nitration reaction

5698 NITRATION
 273267 REACTION
 L2 28 NITRATION REACTION
 (NITRATION (W) REACTION)

=> s l2 and microreactor
 55 MICROREACTOR
 L3 0 L2 AND MICROREACTOR

=> s l2 and micro?
 5864 MICRO?
 L4 1 L2 AND MICRO?

=> dis l4 bib abs

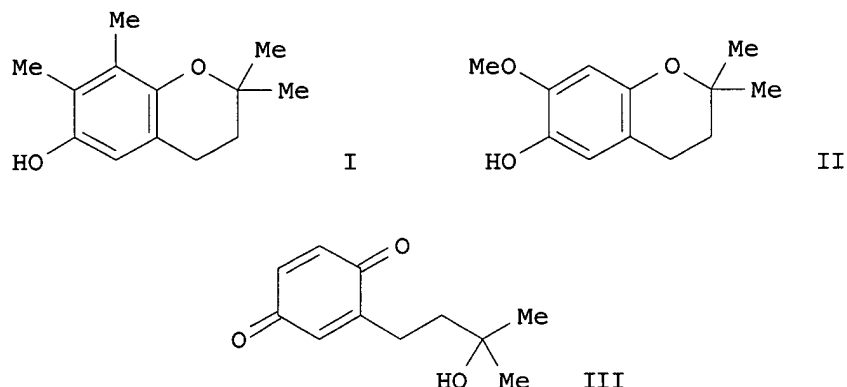
L4 ANSWER 1 OF 1 CASREACT COPYRIGHT 2003 ACS
 AN 113:23454 CASREACT
 TI FK409, a novel vasodilator isolated from the acid-treated fermentation
 broth of Streptomyces griseosporus. III. Reaction mechanism and
 synthesis
 AU Hino, Motohiro; Takase, Shigehiro; Itoh, Yoshikuni; Uchida, Itsuo;
 Okamoto, Masanori; Kohsaka, Masanobu; Aoki, Hatsuo; Imanaka, Hiroshi
 CS Explor. Res. Lab., Fujisawa Pharm. Co., Ltd., Tsukuba, 300-26, Japan
 SO Journal of Antibiotics (1989), 42(11), 1589-92
 CODEN: JANTAJ; ISSN: 0021-8820
 DT Journal
 LA English
 AB FK409 [(E)-O2NCHMeCet:CHC(:NOH)CONH2, I] was considered to be formed via a
 novel synchronous nitrosation-nitration reaction of
 FR-900411 [(2E,4E)-MeCH:CETCH:CHCONH2, II] under acidic conditions with
 nitrite formed by microbial redn. of nitrate. Total synthesis
 of I was achieved starting from (E)-2-ethyl-2-butenal via a nitrosation
 reaction of II as a key step.

=> s l2 and pd<august 1999
 361432 PD<AUGUST 1999
 (PD<19990800)
 L5 26 L2 AND PD<AUGUST 1999

=> s l5 not l4
 L6 25 L5 NOT L4

=> dis l5 1-25 bib abs

L5 ANSWER 1 OF 26 CASREACT COPYRIGHT 2003 ACS
 AN 132:151343 CASREACT
 TI A study of the reaction of different phenol substrates with nitric oxide
 and peroxynitrite
 AU Yenes, Susana; Messeguer, Angel
 CS Department of Biological Organic Chemistry, IIQAB (CSIC), Barcelona,
 08034, Spain
 SO Tetrahedron (1999), 55(49), 14111-14122
 CODEN: TETRAB; ISSN: 0040-4020
 PB Elsevier Science Ltd.
 DT Journal
 LA English
 GI



AB The reactivity of different phenol substrates, e.g., 4-ClC₆H₄OH, with nitric oxide and peroxyxynitrite was investigated. In general, nitration is the major reaction with peroxyxynitrite, while reactions with aq. solns. of nitric oxide led to mixts. of nitro and nitroso derivs. depending upon the phenol. Nitrosation occurs on phenol substrates bearing a free para-position with respect to the OH group with the exception of 1-naphthol, which afforded a 1:1 mixt. of the 2- and the 4-nitroso derivs. Chromans I and II showed the highest reactivity with peroxyxynitrite, which suggests that they can act as efficient scavengers of this toxic intermediate. In both cases the corresponding 5-nitro deriv. was the only reaction product detected. Finally, the fact that chroman II reacts with nitric oxide to afford the p-quinone deriv. III in 90% yield suggests that this antioxidant could also be of potential use as specific nitric oxide tracer in biol. tissues.

RE.CNT 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 2 OF 26 CASREACT COPYRIGHT 2003 ACS

AN 130:209610 CASREACT

TI Furopyridines. XXVIII. Reactions of 3-bromo derivatives of furo[2,3-b]-, -[3,2-b]-, -[2,3-c]- and -[3,2-c]pyridine and their N-oxides

AU Yamaguchi, Seiji; Awajima, Kazuaki; Hirai, Yoshiro; Yokoyama, Hajime; Shiotani, Shunsaku

CS Department of Chemistry, Faculty of Science, Toyama University, Toyama, 930, Japan

SO Journal of Heterocyclic Chemistry (1998), 35(6), 1249-1255
CODEN: JHTCAD; ISSN: 0022-152X

PB HeteroCorporation

DT Journal

LA English

AB Bromination of 3-bromofuro[2,3-b]pyridine, 3-bromofuro[3,2-b]pyridine and 3-bromofuro[3,2-c]pyridine afforded the 2,3-dibromo derivs., while 3-bromofuro[2,3-c]-pyridine did not give the dibromo deriv. Nitration of these compds. gave 2-nitro-3-bromo compds. The N-oxides of the title compds. were submitted to the cyanation with trimethylsilyl cyanide to yield corresponding .alpha.-cyanopyridine compds. Chlorination of bromofuopyridines with phosphorus oxychloride gave chloropyridine derivs. or chlorofuran derivs. Acetoxylation of bromofuopyridine oxides with acetic anhydride yielded acetoxypyridine compds.

RE.CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD

ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 3 OF 26 CASREACT COPYRIGHT 2003 ACS
 AN 130:196745 CASREACT
 TI 2-Nitroferrocenyloxazolines: precursors to nitrofulvalenes and derivatives of (pS)- and (pR)-2-aminoferrocenecarboxylic acids
 AU Salter, Rhys; Pickett, Tom E.; Richards, Christopher J.
 CS Department of Chemistry, Cardiff University, Cardiff, CF1 3TB, UK
 SO Tetrahedron: Asymmetry (1998), 9(23), 4239-4247
 CODEN: TASYE3; ISSN: 0957-4166
 PB Elsevier Science Ltd.
 DT Journal
 LA English
 AB Diastereoselective lithiation of (S)-2-ferrocenyl-4-(1-methylethyl)oxazoline, followed by addn. of N2O4, gave (S)-2-[(pS)-2-nitroferrocenyl]-4-(1-methylethyl)oxazoline which was subsequently converted into derivs. of (pS)-2-aminoferrocenecarboxylic acid. The corresponding (pR)-derivs. were obtained through use of a removable TMS blocking group. The 2-nitroferrocenyloxazolines produced in this work underwent facile photo-decomplexation to give 2-nitrocyclopentadienyliden-1,3-oxazolidenes.

RE.CNT 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 4 OF 26 CASREACT COPYRIGHT 2003 ACS
 AN 128:167195 CASREACT
 TI Reactions of bridged halosubstituted adamantane derivatives with nitric acid
 AU Klimochkin, Yu. N.; Leonova, M. V.; Moiseev, I. K.; Aleksandrov, A. M.
 CS Samara State Technical University, Samara, 443056, Russia
 SO Russian Journal of Organic Chemistry (Translation of Zhurnal Organicheskoi Khimii) (1997), 33(3), 340-344
 CODEN: RJOCEQ; ISSN: 1070-4280
 PB MAIK Nauka/Interperiodica Publishing
 DT Journal
 LA English
 AB Reactions of bridged halosubstituted adamantane derivs. with nitric acid result in nitrolysis products. In the presence of acetic anhydride, the reactions proceed at nodal positions to form nitroxy derivs., while in the case of 2,2-dichloroadamantane, the formation of a 1,4,4-trichloro-substituted deriv. is obsd. The nitroxylation of 2-fluoroadamantane results in the formation of predominantly products with the cis-configuration.

RE.CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 5 OF 26 CASREACT COPYRIGHT 2003 ACS
 AN 128:167194 CASREACT
 TI Nitroxylation of 2-substituted adamantane derivatives
 AU Klimochkin, Yu. N.; Leonova, M. V.; Moiseev, I. K.
 CS Samara State Technical University, Samara, 443056, Russia
 SO Russian Journal of Organic Chemistry (Translation of Zhurnal Organicheskoi Khimii) (1997), 33(3), 334-339
 CODEN: RJOCEQ; ISSN: 1070-4280
 PB MAIK Nauka/Interperiodica Publishing
 DT Journal
 LA English

AB The reactions of bridged alkyladamantanes with nitric acid result in a mixt. of 1,2-nitroxy and 1,4-nitroxy, hydroxy, and nitro derivs., while nitroxylation of compds. with electron-withdrawing substituents in the bridging position gives only the corresponding 5-nitroxy derivs. Substituted adamantanes were characterized by the predominant formation of products with a Z-configuration. The comparative reactivity of 2-substituted adamantane derivs. in the reactions with nitric acid was detd. Correlations between logkapp of the nitroxylation of 2-R-adamantanes and the induction Taft .sigma.*-consts. were established.

RE.CNT 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 6 OF 26 CASREACT COPYRIGHT 2003 ACS
AN 125:114649 CASREACT
TI syntheses and activities of 6-heterocyclyl-1-(substituted phenyl)benzotriazole herbicidal agents
IN Condon, Michael E.; Crews, Alvin D., Jr.; Manfredi, Mark C.
PA American Cyanamid Co., USA
SO U.S., 38 pp.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	---	-----	-----	-----
PI	US 5523277	A	19960604	US 1995-387140	19950210
	US 5496954	A	19960305	US 1995-437099	19950505
	US 5545742	A	19960813	US 1995-437112	19950505
	ZA 9600901	A	19970805	ZA 1996-901	19960205
PRAI	US 1995-387140		19950210		
OS	MARPAT 125:114649				
GI					

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB A multistep process for the synthesis of a 6-heterocyclyl-1-(substituted phenyl)benzotriazole having the structural formula I comprises the condensation of [(benzotriazolyl)phenoxy]propionate, e.g., II [e.g., R1 = OCHMeCO2Me (1), OMe, OCF3, NMe2, Me] [in which II were prepd. from cyclocondensation of Me 2-[p-(acetamido-2-amino-4-fluoroanilino)phenoxy]propionate and Na nitrite] with 3,4,5,6-tetrahydrophthalic anhydride (2). E.g., a soln. of 1 and 2 in HOAc is refluxed for 24 h to give 6-heterocyclyl-1-(substituted phenyl)benzotriazole III. (Phenyl)benzotriazoles I (e.g., III) were tested for herbicidal activity which comprised applying the compd. to the foliage of the plants or to the soil or H2O contg. seeds or other propagating organs thereof at a rate of .apprx.0.016 kg/ha to 4.0 kg/ha.

L5 ANSWER 7 OF 26 CASREACT COPYRIGHT 2003 ACS
AN 124:342842 CASREACT
TI Nitration of benzene to dinitrobenzene and mononitrobenzene using anhydrous nitric acid in the absence of sulfuric acid or aprotic dipolar solvent
IN Mason, Robert W.
PA Olin Corp., USA

SO U.S., 4 pp., Cont.-in-part of U.S. 5,354,924.
CODEN: USXXAM

DT Patent

LA English

FAN.CNT 4

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5488187	A	19960130	US 1994-290575	19940815
	US 5354924	A	19941011	US 1993-108035	19930817
PRAI	US 1988-210549		19880622		
	US 1993-108035		19930817		
	US 1992-900213		19920617		

AB A process is claimed for nitrating benzene to produce dinitrobenzene by a liq. phase **nitration reaction** of anhyd. nitric acid (designate nitric acid having an acid concn. of between 95 and 100 wt. %, preferably at least 98 wt. %, the remainder being water) with benzene in a reactor at a reaction temp. of between 30.degree. and 70.degree., and a reaction pressure not exceeding atm. pressure, said reaction employing a molar ratio of nitric acid plus any water to benzene of between 15:1 and 25:1, said reaction being conducted in the absence of sulfuric acid, and in the absence of any aprotic dipolar solvent during the reaction and in the absence of any aprotic dipolar solvent to halt the reaction, to produce said dinitrobenzene in a product mixt., followed by vacuum distn. of the product mixt., in the absence of any aprotic dipolar solvent, to remove unreacted nitric acid from said product mixt. thereby providing a dinitrobenzene product. In another aspect, the present invention relates to a process for nitrating benzene to produce mononitrobenzene by a liq. phase **nitration reaction** of anhyd. nitric acid with benzene in a reactor at a reaction temp. of between 0.degree. and 60.degree., and a reaction pressure not exceeding atm. pressure, for a reaction time that is preferably less than 15 (more preferably less than 5) minutes, said reaction employing a molar ratio of nitric acid plus any water to benzene of between 2:1 and 4:1, said reaction being conducted in the absence of sulfuric acid, and in the absence of any aprotic dipolar solvent as described above. The following illustrates dinitration: a magnetically stirred soln. of 55.07 g (0.857 mol) of 98% nitric acid in a 100 mL flask was chilled in a water bath; benzene (3.71 g, 0.048 mol) was injected subsurface to the nitric acid at 0.75 mL/min (mol ratio of nitric acid plus water to benzene = 18:1); extn. with CH₂Cl₂ followed by GC anal. indicated complete conversion in < 1 h (mononitrobenzene content < 200 ppm, trinitrophenol content of 200 ppm) and dinitrobenzene isomer ratio 1,2:1,3:1,4 = 9.6:88.3:2.0. The following illustrates mononitration: to a 4 mL glass vial was fed 7.0 mL of 98 % HNO₃ (10.5 g, 0.163 mol of HNO₃) and 5.0 mL benzene (4.39 g, 0.056 mol of benzene) at feed rates of 0.22 mL/min and 0.135 mL/min, resp.; the reactor content was adjusted to 2 mL (mean reaction residence time of 2.8 min); the reactor water bath was maintained at 15.degree. (+-. 5.degree.); extn. with CH₂Cl₂ was followed by GC anal. which indicated recovery of 0.047 mol (83 %) of nitrobenzene.

L5 ANSWER 8 OF 26 CASREACT COPYRIGHT 2003 ACS

AN 123:169503 CASREACT

TI Method for producing aminocarbazole derivatives

IN Kamikawa, Taku; Maruyama, Osamu

PA Sumitomo Chemical Co, Japan

SO Jpn. Kokai Tokkyo Koho, 3 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 07133261	A2	19950523	JP 1993-282636	19931111
PRAI	JP 1993-282636		19931111		

AB Aminocarbazole derives., useful as intermediates for dyes or pigments, are prepd. by catalytic hydrogenation of nitrocarbazoles in the presence of Fe-contg. Ni (1-40 wt.% Fe-Ni) catalyst and an alkali in an inert solvent. The preferred nitrocarbazole derivs. are 1- or 3-nitro-9-(lower alkyl)carbazoles. This process can directly use nitrocarbazole derivs. isolated by regular procedures from a **nitration reaction** mixt. and the redn. is not interfered and slowed down by impurities such as NO₃ ions in the raw material nitrocarbazole derivs. and thereby does not result in low yields. Thus, 100 g 9-ethylcarbazole was nitrated by concd. HNO₃ in 245 g o-dichlorobenzene and the reaction mixt. was neutralized with 10% aq. NaOH, followed by sepg. the oil layer and washing it with warm water to give a soln. (370 g) contg. 110.0 g 3-nitro-9-ethylcarbazole (90% yield), 8.0 g 1-nitro-9-ethylcarbazole, and NO₃- 30 ppm in o-dichlorobenzene. The latter soln. 375, H₂O 115, NaOH 1.0, and Raney Ni (30 wt.% Fe) 2.2 g were added to an autoclave, hydrogenated under H pressure 8 kg/cm².G at 80.degree. with stirring for 3 h, cooled to 70.degree., and filtered to give, after sepn. of the aq. layer, a soln. (345 g) of 3-amino-9-ethylcarbazole in o-dichlorobenzene in 98% yield. Hydrogenation of the same soln. in the presence of Raney Ni without Fe and FeSO₄ at 80.degree. and H pressure 8 kg/cm².G for 14 h gave 3-amino-9-ethylcarbazole in 87% yield.

L5 ANSWER 9 OF 26 CASREACT COPYRIGHT 2003 ACS

AN 123:55613 CASREACT

TI Nitration by oxides of nitrogen. 9. Preparation of nitramine-nitrates by ring-opening nitration of azetidines by dinitrogen pentoxide (N₂O₅)

AU Golding, Peter; Millar, Ross W.; Paul, Norman C.; Richards, David H.

CS Defense Res. Agency, Kent, TN14 7BP, UK

SO Tetrahedron (1995), 51(17), 5073-82

CODEN: TETRAB; ISSN: 0040-4020

PB Elsevier

DT Journal

LA English

AB Eleven azetidines, bearing various types of substituents on the ring nitrogen, were treated with N₂O₅ in chlorinated solvents at sub-ambient temp. and in certain cases formed 1,3-nitramine-nitrate products by a novel ring-opening **nitration reaction** analogous to that established for aziridines. Yields of the nitramine-nitrates, where ring-opening took place, were generally moderate to high (41-88 %), but azetidines bearing N-acyl substituents (acetyl, butyryl or carbamyl) instead underwent nitrolysis of the exocyclic substituent to form N-nitroazetidine. Also, azetidines bearing strongly electron-withdrawing groups such as picryl were inert to attack by N₂O₅. The different reactivity of azetidines compared with aziridines is rationalized in terms of the reduced ring strain of the four-membered ring compds.

L5 ANSWER 10 OF 26 CASREACT COPYRIGHT 2003 ACS

AN 122:265918 CASREACT

TI A New Route to 15N-Labeled, N-Alkyl, and N-Amino Nucleosides via N-Nitration of Uridines and Inosines

AU Ariza, Xavier; Bou, Valenti; Vilarrasa, Jaume

CS Faculty of Chemistry, University of Barcelona, Barcelona, 08028, Spain

SO Journal of the American Chemical Society (1995), 117(13), 3665-73

CODEN: JACSAT; ISSN: 0002-7863

PB American Chemical Society

DT Journal

LA English

AB A novel method for the specific [3-15N]-labeling of pyrimidine nucleosides and [1-15N]-labeling of purine nucleosides is reported. The N-nitration reaction is carried out in good yields with nitronium trifluoroacetate in cold dichloromethane. Treatment of the resulting N-nitro nucleosides with 15NH₃, alkylamines, or hydrazine cleaves the pyrimidine ring at room temp., affording open intermediates which undergo cyclization to 15N-labeled, N-alkylated, or N-amino nucleosides, resp. Prepn. of [1-15N]adenosine from inosine in a 52% overall yield is illustrative of the scope of the procedure. [3-15N,15NH₂]-5'-O-Acetyl-3-amino-2',3'-O-isopropylideneuridine and [1-15N,15NH₂]-2',3',5'-tri-O-acetyl-1-aminoinosine have also been obtained from double labeled hydrazine. By using a 15N-labeled substrate and/or 15N-labeled benzylamine it is shown that the amine attack takes mainly place at C4 of uridine and at C2 of inosine.

L5 ANSWER 11 OF 26 CASREACT COPYRIGHT 2003 ACS

AN 120:53917 CASREACT

TI Nitration by oxides of nitrogen. Part 6. Preparation of di- and polynitrates by ring-opening nitration of epoxides by dinitrogen pentoxide (N₂O₅)

AU Golding, Peter; Millar, Ross W.; Paul, Norman C.; Richards, David H.

CS Def. Res. Agency, Fort Halstead/Sevenoaks/Kent, TN14 7BP, UK

SO Tetrahedron (1993), 49(32), 7037-50

CODEN: TETRAB; ISSN: 0040-4020

DT Journal

LA English

AB Eighteen epoxides were treated with N₂O₅ in chlorinated hydrocarbon solvents (principally CH₂Cl₂) to give vicinal nitrate ester products by a novel ring-opening **nitration reaction**. The procedure offers easier temp. control and simpler isolation procedures compared with conventional mixed-acid nitrations; it also enables selective nitrations to be carried out on polyfunctional substrates. The scope and limitations of the reaction, as well as those of an alternative route utilizing N₂O₄ with in situ oxidn. of an intermediate nitrite-nitrate, are discussed.

L5 ANSWER 12 OF 26 CASREACT COPYRIGHT 2003 ACS

AN 114:228678 CASREACT

TI Aprotic nitration (NO₂+BF₄⁻, nitryl tetrafluoroborate) of 2-halo- and 2,6-dihalopyridines and transfer-nitration chemistry of their N-nitropyridinium cations

AU Duffy, Joseph L.; Laali, Kenneth K.

CS Dep. Chem., Kent State Univ., Kent, OH, 44242, USA

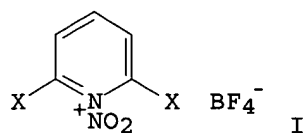
SO Journal of Organic Chemistry (1991), 56(9), 3006-9

CODEN: JOCEAH; ISSN: 0022-3263

DT Journal

LA English

GI



AB NO₂+BF₄⁻ nitration of 2,6-dibromo- and 2,6-dichloropyridine in CH₃CN results in predominant C-nitration, whereas in CH₂Cl₂, N-nitration is predominant. With 2,6-difluoropyridine only C-nitration is obsd. Dehalogenation of the C-nitrated derivs. affords 3-nitropyridine in moderate but greatly improved yields over conventional protic nitration of pyridine. Despite favorable steric inhibition to resonance and the -I effects of halogens, N-nitrated pyridinium salts I (X = Br, Cl) do not transfer-nitrate to aroms. even under forcing conditions. The lack of transfer-nitration reactivity is not due to in situ rearrangement of the nitro onium ions to nitrito onium ions. A mechanism involving neighboring group participation by the 2,6-halogens is proposed. The monohalo-N-nitropyridinium cations transfer-nitrate toluene and benzene. Transfer-nitration selectivities of the 2-bromo- and 2-chloro-N-nitropyridinium cations are comparable (KT/KB = 41-44), but the 2-fluoro-N-nitro cation is much less selective (more reactive) (KT/KB = 15.4), indicative of a stronger -I effect, weakening the N-N bond.

L5 ANSWER 13 OF 26 CASREACT COPYRIGHT 2003 ACS

AN 113:23454 CASREACT

TI FK409, a novel vasodilator isolated from the acid-treated fermentation broth of *Streptomyces griseosporus*. III. Reaction mechanism and synthesis

AU Hino, Motohiro; Takase, Shigehiro; Itoh, Yoshikuni; Uchida, Itsuo; Okamoto, Masanori; Kohsaka, Masanobu; Aoki, Hatsuo; Imanaka, Hiroshi

CS Explor. Res. Lab., Fujisawa Pharm. Co., Ltd., Tsukuba, 300-26, Japan

SO Journal of Antibiotics (1989), 42(11), 1589-92

CODEN: JANTAJ; ISSN: 0021-8820

DT Journal

LA English

AB FK409 [(E)-O₂NCHMeCet:CHC(:NOH)CONH₂, I] was considered to be formed via a novel synchronous nitrosation-nitration reaction of FR-900411 [(2E,4E)-MeCH:CetCH:CHCONH₂, II] under acidic conditions with nitrite formed by microbial redn. of nitrate. Total synthesis of I was achieved starting from (E)-2-ethyl-2-butenal via a nitrosation reaction of II as a key step.

L5 ANSWER 14 OF 26 CASREACT COPYRIGHT 2003 ACS

AN 112:219231 CASREACT

TI Manufacture of 1-nitroanthraquinone

IN Muszynski, Mirosław

PA Ośrodek Badawczo-Rozwojowy Przemysłu Barwników "Organika", Pol.

SO Pol., 4 pp.

CODEN: POXXA7

DT Patent

LA Polish

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	---	-----	-----	-----
PI	PL 136528	B2	19860228	PL 1983-243478	19830818

PRAI PL 1983-243478 19830818

AB The title compd. (I) is produced by nitration of a 5-50% anthraquinone (II) soln. or suspension in .gtoreq.70% H₂SO₄ or oleum contg. .ltoreq.65% SO₃ by using a 5-50% aq. inorg. nitrate soln. at a nitrate/II mol ratio (1.0-2.5):1 and at -10 to +120.degree.. Preferably, the nitrate is NaNO₃, KNO₃, Ca(NO₃)₂, and/or Al(NO₃)₃. Purity of the resulting I is >90% which is satisfactory for manuf. of 1-aminoanthraquinone and further dye intermediates. Thus, the **nitration reaction** was done in a cascade of 4 reactors where a 10% II soln. in 100% H₂SO₄ at 20.8 parts/min and 30% aq. KNO₃ soln. at 4.5 parts/min were fed into the 1st 1 m³ reactor, and in the 2nd reactor, 65% oleum was added at 5 parts/min, and in the 4th reactor, water was added at 50 parts/min, with temps. in the 1st, 2nd, 3rd, and 4th reactors 35-45.degree., 65-75.degree., 90.degree., and 30.degree., resp. The product was withdrawn, filtered on a rotary filter, washed with water to pH 7, and dried to give I (purity 93%) at 25 parts/min.

L5 ANSWER 15 OF 26 CASREACT COPYRIGHT 2003 ACS

AN 112:51866 CASREACT

TI Structure and synthesis of FK409, a novel vasodilator isolated from Streptomyces as a semi-artificial fermentation product

AU Hino, Motohiro; Takase, Shigehiro; Itoh, Yoshikuni; Uchida, Itsuo; Okamoto, Masanori; Hashimoto, Masashi; Kohsaka, Masanobu

CS Explor. Res. Lab., Fujisawa Pharm. Co., Tsukuba, 300-26, Japan

SO Chemical & Pharmaceutical Bulletin (1989), 37(10), 2864-6

CODEN: CPBTAL; ISSN: 0009-2363

DT Journal

LA English

AB The structures of FK409, a semi-artificial fermn. product and its precursor 4-ethylhexa-2,4-dienamide (I), were established by chem. and spectroscopic evidence and confirmed by conversion of I to FK409 via a synchronous nitrosation-**nitration reaction**.

L5 ANSWER 16 OF 26 CASREACT COPYRIGHT 2003 ACS

AN 111:186494 CASREACT

TI Assessment of on-line nitration reactions as a means of determining nitrate by reversed-flow injection with reductive amperometric detection at a glassy carbon electrode

AU Fogg, Arnold G.; Scullion, S. Paul; Edmonds, Tony E.

CS Chem. Dep., Loughborough Univ. Technol., Loughborough/Leicestershire, LE11 3TU, UK

SO Analyst (Cambridge, United Kingdom) (1989), 114(5), 579-81

CODEN: ANALAO; ISSN: 0003-2654

DT Journal

LA English

AB Five compds. were investigated for use as online reagents in concd. H₂SO₄ for the reductive reversed flow-injection amperometric detn. of nitrate as a nitro deriv. at a glassy carbon electrode. The H₂SO₄ was dild. rapidly on injecting reagent soln. into a sample carrier stream and therefore the **nitration reaction**, which generally only takes place at H₂SO₄ concns. of greater than about 70%, had to be rapid. Thiophene-2-carboxylic acid was found to be the most suitable reagent of those studied. The **nitration reaction** was sufficiently rapid and the first of two redn. steps was at -0.19 V vs. SCE as indicated by linear sweep voltammetry; hence the detn. was free from interference by dissolved oxygen. Problems assocd. with contamination of the electrode surface with redn. product, which caused loss of signal after making repeated injections over an extended period, remained.

L5 ANSWER 17 OF 26 CASREACT COPYRIGHT 2003 ACS
 AN 109:233186 CASREACT
 TI Separation of sulfuric and nitric acids from dinitrotoluene-containing toluene **nitration reaction** mixtures by water addition
 IN Witt, Harro; Beckhaus, Heiko
 PA Bayer A.-G., Fed. Rep. Ger.
 SO Ger. Offen., 3 pp.
 CODEN: GWXXBX
 DT Patent
 LA German
 FAN.CNT 1

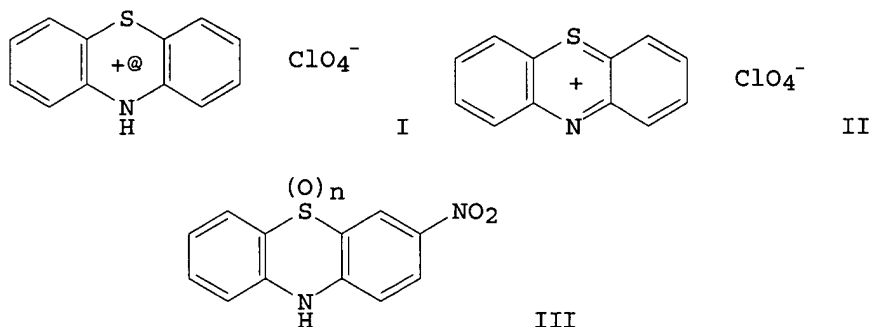
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 3705091	A1	19880901	DE 1987-3705091	19870218
	EP 279312	A2	19880824	EP 1988-101799	19880208
	EP 279312	A3	19900425		
	EP 279312	B1	19920506		
	R: BE, DE, ES, FR, IT				
	ES 2031167	T3	19921201	ES 1988-101799	19880208
	US 5001286	A	19910319	US 1988-155199	19880212
	JP 63203650	A2	19880823	JP 1988-32001	19880216
	JP 2640956	B2	19970813		

PRAI DE 1987-3705091 19870218
 AB In the manuf. of dinitrotoluene, toluene **nitration reaction** mixts., after removal of the major portion of H₂SO₄ and HNO₃, still contain .ltoreq.5% HNO₃ and .ltoreq.6% H₂SO₄. By addn. of .ltoreq.10% H₂O (based on dinitrotoluene content) to the **nitration reaction** mixt., a phase sepn. is produced and the remainder of the acids are removed in the aq. phase.

L5 ANSWER 18 OF 26 CASREACT COPYRIGHT 2003 ACS
 AN 107:22931 CASREACT
 TI Some features characterizing the **nitration reaction** of secondary polynitroalkanes
 AU Erementsko, L. T.; Oreshko, G. V.; Fadeev, M. A.
 CS Otd. Inst. Khim. Fiz., Chernogolovka, USSR
 SO Izvestiya Akademii Nauk SSSR, Seriya Khimicheskaya (1986), (6), 1357-61
 CODEN: IASKA6; ISSN: 0002-3353
 DT Journal
 LA Russian
 AB Nitration of pyridinium salts of (O₂N)2CRCH₂CH(NO₂)CH₂CR(NO₂)₂ (R = NO₂, F) with HNO₃, HNO₃-H₂SO₄, aq. HNO₃, N₂O₄, NO₂BF₄, and ClNO₂ was studied. Products and product ratios varied widely with reagents and reagent concns.

L5 ANSWER 19 OF 26 CASREACT COPYRIGHT 2003 ACS
 AN 96:6667 CASREACT
 TI Oxidation state of cation radicals in the **nitration reaction** of phenothiazine by nitric acid
 AU Morkovnik, A. S.; Dobaeva, N. M.; Okhlobystin, O. Yu.
 CS Rostov Gos. Univ., Rostov, 344006, USSR
 SO Khimiya Geterotsiklicheskih Soedinenii (1981), (9), 1214-16
 CODEN: KGSSAQ; ISSN: 0453-8234
 DT Journal
 LA Russian

GI



AB Nitration of phenothiazine by $\text{HNO}_3\text{-HClO}_4$ gave 78% cation radical I which was oxidized by HNO_3 to give 68% phenothiazonium perchlorate II. Further nitration gave 81% III ($n = 1$) via III ($n = 0$).

L5 ANSWER 20 OF 26 CASREACT COPYRIGHT 2003 ACS

AN 84:30013 CASREACT

TI Halosubstituted phenylcyclopropanes in a **nitration reaction**

AU Shabarov, Yu. S.; Mochalov, S. S.; Novokreshchennykh, V. D.; Volkov, E. M.; Ermishkina, S. A.

CS Mosk. Gos. Univ. im. Lomonosova, Moscow, USSR

SO Zhurnal Organicheskoi Khimii (1975), 11(9), 1907-13

CODEN: ZORKAE; ISSN: 0514-7492

DT Journal

LA Russian

GI For diagram(s), see printed CA Issue.

AB Nitration of I in Ac_2O gave 40% II, 23% III and 9% IV. Nitration of V ($X = \text{Cl}, \text{Br}$) gave 33-51.9% VI and 31.7-43.8% VII; nitration of V ($X = \text{iodo}$) gave 11.4% VI, 16.8% VII, 53% (2-nitrophenyl)cyclopropane, 5.5% 1-(2-iodophenyl)-1,3-propanediol dinitrate, and 5.4% 1-acetoxy-1-(2-iodophenyl)-3-propanol. The orientation of the NO_2 was detd. by the cyclopropyl ring. Several of the cyclopropylhalonitrobenzenes were isomerized.

L5 ANSWER 21 OF 26 CASREACT COPYRIGHT 2003 ACS

AN 84:4749 CASREACT

TI Nitration of furan derivatives by acetylnitrate. I. Products of the nitration of the methyl ester of furan-2-carboxylic acid

AU Lola, D.; Venters, K.; Liepins, E.; Hillers, S.

CS Inst. Org. Sint., Riga, USSR

SO Khimiya Geterotsiklicheskih Soedinenii (1975), (7), 883-9

CODEN: KGSSAQ; ISSN: 0132-6244

DT Journal

LA Russian

GI For diagram(s), see printed CA Issue.

AB Nitration of Me 2-furancarboxylate by $\text{HNO}_3\text{-H}_2\text{SO}_4\text{-Ac}_2\text{O}$ gave I-VI which were sepd. by chromatog. and identified by ir, uv, and NMR spectroscopy.

- L5 ANSWER 22 OF 26 CASREACT COPYRIGHT 2003 ACS
AN 83:192710 CASREACT
TI Demethylation and nitration of aryldimethylamines with cerium(IV) ammonium nitrate
AU Galliani, Guido; Rindone, Bruno; Scolastico, Carlo
CS Ist. Chim. Org., Univ. Milano, Milan, Italy
SO Synthetic Communications (1975), 5(5), 319-23
CODEN: SYNCAV; ISSN: 0039-7911
DT Journal
LA English
AB Treatment of Me₂NPh with cerium ammonium nitrate (I) in MeOH gave 40% p-Me₂NC₆H₄C₆H₄NMe₂-p; in HOAc or MeCN 2,4-(O₂N)₂C₆H₃NHMe was obtained in 47 and 11% yield, resp. Treatment of p-O₂NC₆H₄NMe₂ with I in MeOH, MeCN, and HOAc, resp. gave p-O₂NC₆H₄NHMe in 89, 60, and 23% yield, resp.; similar results were obtained for p-RC₆H₄NMe₂ in HOAc and MeCN. A mechanism was presented for the oxidative demethylation process and the **nitration reaction**.
- L5 ANSWER 23 OF 26 CASREACT COPYRIGHT 2003 ACS
AN 69:2806 CASREACT
TI Chemistry and biochemistry of plant matter. XX. Nitration of 3',4'-dimethoxyflavanone and derivatives
AU Reichel, Ludwig; Miller, Kurt
CS Humboldt Univ., Berlin, Fed. Rep. Ger.
SO Justus Liebig's Annalen der Chemie (1968), 712, 146-51
CODEN: JLACBF; ISSN: 0075-4617
DT Journal
LA German
AB The course of the **nitration reaction** with fuming HNO₃ and the influence of various substituents on the nitration of 3',4'-dimethoxyflavanone and its derivs. was studied. A no. of substituted 2'-hydroxynitrochalcones and their corresponding nitroflavanones were prepd. and characterized.
- L5 ANSWER 24 OF 26 CASREACT COPYRIGHT 2003 ACS
AN 57:29296 CASREACT
TI Synthesis of 2,2-dinitropropanol. Studies on continuous preparation
AU Hamel, Edward E.; Dehn, John S.; Love, Joseph A.; Scigliano, Joseph J.; Swift, Arden H.
CS Aerojet-Gen. Corp., Sacramento, CA
SO Ind. Eng. Chem., Prod. Res. Develop. (1962), 1, 108-16
DT Journal
LA Unavailable
AB Two routes to 2,2-dinitropropanol (I) have been evaluated as potential production processes. One route utilized the oxidative-**nitration reaction** of AgNO₃ and NaNO₂ on MeCH:CHNO₂ to produce MeCH(NO₂)₂ (II). Treatment of II with HCHO in the presence of a basic catalyst or treatment of its salt, MeC(NO₂):NO₂Na, with HCHO and 1 equiv. acid produced I. Overall yields of 75% were obtained on a pilot plant scale. Ag losses (about 1%) constituted a serious drawback to large scale production. The second method (Meer, Ann. 181, 1(1876)) involved conversion of MeCHClNO₂ (III) to MeC(NO₂):NO₂K (IV) and methylation of IV to give I. A satisfactory prepn. of pure III was devised and a continuous 4-step process was developed for I starting with nitroethane (V) with III and IV as intermediates. Although the first method gave higher yields (80% vs. 65% based on V), the second method appeared to be superior for the prepn. of large quantities of I.

L5 ANSWER 25 OF 26 CASREACT COPYRIGHT 2003 ACS
 AN 50:27961 CASREACT
 TI Alkaline nitration. I. The nitration of amines with cyanohydrin nitrates
 AU Emmons, Wm. D.; Freeman, Jeremiah P.
 CS Rohm & Haas Co., Huntsville, AL
 SO J. Am. Chem. Soc. (1955), 77, 4387-90
 CODEN: JACSAT; ISSN: 0002-7863
 DT Journal
 LA Unavailable
 AB Me₂C(CN)ONO₂ (I) has been found to be a unique reagent for effecting nitration under alk. conditions. Primary and secondary amines are converted with I to the corresponding nitramines. Me₂C(OH)CN (255 g.) stirred 0.5 hr. with 462 g. white fuming HNO₃ (d. 1.48-1.50) in 1225 g. Ac₂O, the mixt. poured into 1500 cc. ice water, stirred 1 hr. intermittently, and extd. with three 300-cc. portions CH₂Cl₂, and the ext. washed with 200 cc. 5% aq. NaHCO₃, dried, and fractionated gave 255-67 g. I, b₁₀ 65-6.degree., n_D20 1.4172. iso-Bu₂NH (64.5 g.) in 100 cc. MeCN treated at room temp. with 13.0 g. I in 50 cc. MeCN, the mixt. heated 4 hrs. at 80.degree., poured into 200 cc. 10% HCl, and extd. with CH₂Cl₂, the ext. washed with 5% aq. NaHCO₃ and H₂O, dried, and evapd., and the white cryst. residue recrystd. from EtOH and H₂O gave iso-Bu₂NNO₂, shiny white platelets, m. 79-80.degree.. Morpholine (17.4 g.) treated at room temp. with 13.0 g. I, the mixt. heated 1 hr. at 80.degree., poured into dil. HCl, and extd. with CH₂Cl₂, the ext. dried and evapd., and the solid residue (13.0 g.) recrystd. from EtOH and H₂O yielded 10.9 g. N-nitromorpholine, m. 51-3.degree.. BuNH₂ (36.5 g.) in 50 cc. MeCN treated with 13.0 g. I, the mixt. refluxed 6 hrs. and worked up in the usual manner, and the residue distd. yielded 6.1 g. BuNHNO₂, b_{0.05} 68-70.degree., n_D20 1.4596; the aq. exts. made alk. with Na₂CO₃ and extd. with Et₂O, and the ext. dried and distd. gave 5.6 g. .alpha.-butylaminoisobutyronitrile, b₈ 58-9.degree., n_D20 1.4286. Similarly were prepd. the following nitramines (b.p./mm., n_D20, and % yield given) with I: Me₂NNO₂, - (m. 57-8.degree.), -, 76; Et₂NNO₂, 50-2.degree./0.2, 1.4525, 60; Pr₂NNO₂, 90-2.degree./8, 1.4558, 42; Bu₂NNO₂ (II), 69-70.degree./0.1, 1.4562, 54; iso-Am₂NNO₂, 112-14.degree./2, 1.4604, 64; N-nitropiperidine, 62-4.degree./0.2, 1.4968, 62; N-nitropyrrolidine, - (m. 55-7.degree.), -, 60; PrNHNO₂, 52-6.degree./0.1, 1.4610, 50; iso-BuNHNO₂, 58-60.degree./0.1, 1.4570, 54; AmNHNO₂, 60-2.degree./0.2, 1.4611, 55; iso-AmNHNO₂, 62-4.degree./0.02, 1.4594, 54. Piperazine hexahydrate (III) (38.4 g.) in 100 cc. HCONMe₂ heated 5 hrs. at 80.degree. with 13.0 g. I, the solvent distd. off in vacuo, the residue cooled in Dry Ice, and the resulting pale yellow solid filtered and recrystd. from EtOH yielded 7.0 g. small white platelets of mono-N-nitropiperazine, m. 127-8.degree.; it gave with PhNCS the phenylthiourea deriv., m. 204-5.degree. (from EtOH). III (38.4 g.) in 100 cc. EtOH and 50 cc. CH₂Cl₂ refluxed 4 hrs. with 13.0 g. I, the mixt. allowed to stand overnight, the solvent evapd., and the residue recrystd. from EtOH yielded 6.7 g. N,N'-di(.alpha.-cyanoisopropyl)piperazine, m. 178-80.degree.. III (19.4 g.) in 75 cc. HCONMe₂ heated 4 hrs. at 75.degree. with 13.0 g. I, the mixt. evapd., and the solid residue recrystd. from EtOH yielded 6.8 g. N-nitro-N'-(.alpha.-cyanoisopropyl)piperazine, m. 140-2.degree.. Cyclohexanone cyanohydrin (90 g.), 111 g. fuming HNO₃, and 180 g. Ac₂O gave in the usual manner 107.5 g. cyclohexanone cyanohydrin nitrate (IV), b_{0.3} 62-4.degree., n_D20 1.4660. Cyclopentanone (168 g.), 260 g. KCN, and 377 cc. Ac₂O in 500 cc. H₂O yielded 183 g. cyclopentanone cyanohydrin (V), b_{0.3} 74-6.degree.. V (183 g.), 310 g. fuming HNO₃, and 837 g. Ac₂O gave in the usual manner 216 g. nitrate (VI) of V, b_{0.25} 50-1.degree., n_D20 1.4592. IV (8.5 g.) and 32.3 g. Bu₂NH heated 4 hrs. in 50 cc. tetrahydrofuran, the mixt. poured

10/048,157

into dil. HCl and extd. with Et₂O, the ext. washed with 10% aq. NaHSO₃, dried, and concd., and the residue distd. gave 5.0 g. II. VI (7.8 g.) and 32.3 g. Bu₂NH yielded 5.5 g. II. Me₂C(OH)CCl₃.2H₂O (21.3 g.) added during 10 min. to 102 g. Ac₂O and 18.9 g. anhyd. HNO₃, the mixt. stirred 0.5 hr. at room temp., quenched in 400 cc. H₂O-ice mixt., and extd. with three 100-cc. portions Et₂O, the ext. washed with 10% aq. Na₂CO₃ and H₂O, dried, and evapd. in vacuo, and the residue distd. gave 20.0 g. Me₂C(ONO₂)CCl₃, b_{1.0} 46-50.degree., n_D²⁰ 1.4810; it did not react with piperidine. Me₂C(OH)CO₂Et (13.2 g.) added to 18.9 g. abs. HNO₃, 51 g. Ac₂O, and 30 g. AcOH, the mixt. stirred 2 hrs. at room temp., poured into ice water and extd. with CH₂Cl₂, and the ext. dried and distd. gave 15.9 g. Me₂C(ONO₂)CO₂Et, b₁₂ 74-6.degree., n_D²⁰ 1.4172; it did not react with secondary amines.

=> log y

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

72.88

73.09

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE

TOTAL

ENTRY

SESSION

CA SUBSCRIBER PRICE

-16.12

-16.12

STN INTERNATIONAL LOGOFF AT 13:43:47 ON 19 MAR 2003